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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
SHIN, KYUNG H	

ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/964,129	ISHIZAKI ET AL.	
	Examiner	Art Unit	
	Kyung H. Shin	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This action is responding to application papers filed 5/16/2005.

2. Claims **1 - 19** are pending. Claims **1, 16, 17, 18, 19** have been amended. Claim **20** has been cancelled. Independent claims are **1, 16, 17, 18, 19**.

Response to Arguments

3. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

3.1 Applicant argues that the referenced prior art does not disclose: "*... teach application identification and operating system information ...*". Gonda in view of Bradley discloses the storage and retrieval of application identification and operating system identification information. (see Bradley col. 3, lines 54-57: application identification information (i.e. application name, server identification information); col. 16, lines 61-62: Operating System (OS) identification information for application)

Claim Rejection - 35 USC § 103

The text of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. **Claims 1 - 5, 7 - 11, 14, 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Gonda et al.** (US Patent No. 6,662,221) in view of **Rao et al.** (US Patent No. 6,674,756) and further in view of **Brenner et al.** (US Patent No.

5,881,227).

Regarding Claims 1 (Currently Amended), Gonda discloses a system, comprising:

a) a connection to a virtual private network; (see Gonda col. 4, lines 48-53: VPN connectivity)

c) a server having a logical partition; (see Gonda col. 2, line 64 - col. 3, line 3: VPN server system, OS software must be booted into a logical partition for load operating system)

e) at least one volume; (see Gonda col. 6, lines 13-14: volume attached to server system)

Gonda does not discloses the usage of logical partitions, a virtual LAN utilizing one or more virtual routers, a switch for controlling services. However, Rao and Brenner discloses:

b) a router, coupled to said virtual private network connection, wherein said router maintains a virtual router, said virtual router configurable to be dedicated to a customer; (see Rao col. 12, lines 6-11; col. 2, lines 28-30: VLAN switch, virtual LAN consisting of one or more virtual routers connecting VPNs; col. 9, lines 30-43: mapping between router and host)

d) a virtual LAN switch, coupled to said router, said virtual LAN switch providing selectable forwarding of information from said virtual router to said logical partition in accordance with virtual LAN configuration information mapping the virtual router to the logical partition; (see Rao

col. 12, lines 6-11; col. 2, lines 28-30; col. 9, lines 30-43: VLAN switch, virtual LAN consisting of one or more virtual routers, mapping between virtual router and host) (see Brenner col. 5, lines 5-8: switch; col. 4, lines 45-50; col. 8, line 66 - col. 9, line 4: mapping between host and logical partition, mapping between host (i.e. authorized user, customer) and virtual router, resulting in mapping between virtual router and host)

f) an FC switch, wherein said FC switch provides selectable interconnection between said logical partition and said at least one volume (see Brenner col. 5, lines 5-8: switch; col. 4, lines 45-50; col. 8, line 66 - col. 9, line 4: mapping between host and logical partition plus a mapping between host (i.e. customer) and virtual router), so that information received from said customer via said virtual private network connection is directed to said virtual router by said router, and wherein said information is then directed to said logical partition of said server by said virtual LAN switch, and wherein said information is then directed to one of said at least one volume by said FC switch. (see Rao col. 12, lines 6-11; col. 2, lines 28-30; col. 9, lines 30-43: VLAN switch, authorized user (i.e. customer), virtual LAN, one or more virtual routers, VPN connections, mapping between virtual router and host)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gonda to enable utilization of virtual LAN technology with virtual router capability as taught by Rao, and to enable the creation, usage management information to implement logical

partition technology as taught by Brenner. One of ordinary skill in the art would be motivated to employ Rao in order to provide fault tolerant and efficient services within an network environment with increased number and variety of network traffic (see Rao col. 2, lines 6-9: *" ... network switch capable of providing fault-tolerant and efficient services that will accommodate the increase in the number and the variety of network traffic ... "*), and to employ Brenner in order to enable the creation of multiple independent isolated processing environments (see Brenner col. 2, lines 43-48: *" ... create multiple production environments with the same non-interfering characteristics ... sufficiently isolated (so that one environment does not adversely affect the working of other environments) ... "*).

Regarding Claim 2, Gonda discloses the system of claim 1, further comprising a virtual private network management system that controls operation of said router. (see Gonda col. 4, lines 25-27; col. 3, lines 49-52: router utilized for VPN server and network management communications)

Regarding Claim 3, Gonda discloses the system of claim 2, said virtual private network management system further comprising: a network interface module that receives commands from an integrated service management system (see Gonda col. 3, lines 60-64: integrated services management), a service order processing module that analyzes and executes the commands (see Gonda col. 12, lines 2-7; col. 12, lines 12-18: service order and command processing system), updates a

table of virtual private network information, and sends new configuration information to said router through a control module (see Gonda col. 11, lines 41-47: update, maintain VPN information database; col. 7, lines 51-56: configuration changes are processed and implemented).

Regarding Claim 4, Gonda discloses the system of claim 2, said virtual service management system further comprising a virtual private network table, said virtual private network table having a VPN ID that identifies a specific VPN, an Address 1 and an Address 2 that hold IP addresses of two end points of said specific VPN (see Gonda col. 14, lines 17-23: VPN tunnel endpoints are maintained), a Protocol that specifies a VPN protocol that is used on said specific VPN (see Gonda col. 11, lines 41-47: specific VPN tunnel type, an Internet that indicates whether access to public Internet is permitted (see Gonda col. 4, lines 44-47: Internet access for VPN), and a VLAN ID that is assigned to packets received over said specific VPN (see Gonda col. 14, lines 14-15: VPN (VLAN) identification information maintained).

Regarding Claim 5, Gonda discloses the system of claim 1, further comprising a server management system that controls operation of said virtual LAN switch. (see Gonda col. 2, line 64 - col. 3, line 3: VPN server network management system)

Regarding Claim 7, Gonda discloses the system of claim 1, further comprising

an integrated service management system that controls operations. (see Gonda col. 3, lines 49-52: integrated services VPN network management system)

Regarding Claim 8, Gonda discloses the system of claim 7, said integrated service management system further comprising: a network interface module that receives requests to change configuration, a service order processing module that analyzes and executes requests to change configuration received by said network interface module (see Gonda col. 12, lines 2-7: service order configuration requests processed), updates related table cache in a service management database, and sends new configuration information using said network interface module. (see Gonda col. 7, lines 51-56: configuration changes are processed and implemented)

Regarding Claim 9, 10, Gonda discloses the system of claim 8, further comprising an operator console application, customer portal application that sends a request command to change service configuration to said integrated management system. (see Gonda col. 8, lines 7-14: configuration change requests are processed and implemented)

Regarding Claim 11, Gonda discloses the system of claim 8, said integrated service management system further comprising a service configuration table, said service configuration table having destination information. (see Gonda col. 8, lines 31-47: VPN connection destination information)

Regarding Claim 14, Gonda discloses the system of claim 8, said integrated service management system further comprising a service mapping table, said service mapping table having a customer identifier, a virtual private network identifier, a server identifier, and a volume identifier. (see Gonda col. 14, lines 3-8; col. 14, lines 14-15; col. 14, lines 51-53: customer identification, VPN Identification, server identification, volume identification)

Regarding Claim 15, Gonda discloses the system of claim 8, said integrated service management system further comprising a service status table, said service status table having a customer identifier, a virtual private network status, a server status, and a volume status (see Gonda col. 14, line 16: VPN, server, volume status information; col. 14, lines 3-8; col. 14, lines 14-15: customer identification, VPN identification)

5. **Claims 6, 13, 16 - 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonda et al. (US Patent No. 6,662,221) in view of Rao et al. (US Patent No. 6,674,756) and further in view of Brenner et al. (US Patent No. 5,881,227) and further in view of Blumenau et al. (US Patent No. 6,665,714).

Regarding Claim 6, Gonda discloses a management system for controlling a switch (see Gonda col. 14, lines 57-58; col. 3, lines 60-64: VPN switch utilized by VPN management system). Gonda does not disclose a storage management

system. However, Blumenau discloses a system of claim 1, further comprising a storage management system. (see Blumenau col. 2, lines 4-12: data storage management system)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gonda to implement a storage management system as taught by Blumenau. One of ordinary skill in the art would be motivated to employ Blumenau in order to provide centralized data management and strengthen security by removal of trust requirement in accessing storage in network communications. (see Blumenau col. 5, lines 33-38: *" ... data management to be centralized ... removes the need to trust the hosts seeking access to the storage system ... "*)

Regarding Claim 13, Gonda discloses an integrated services management system. Gonda does not disclose a storage table having volume, port, HBA, capacity identification and access information. However, Blumenau discloses the system of claim 8, further comprising a storage table, said storage table having a volume identifier (see Blumenau col. 29, lines 46-53: volume identification), a port identifier, (see Blumenau col. 23, lines 2-7: port identification) an allowed host bus adapter(s) (HBAs) identifier (see Blumenau col. 8, lines 35-41: HBA identifiers), a capacity identifier (see Blumenau col. 29, lines 46-53: capacity parameter), and an access information (see Blumenau col. 2, lines 45-52: access information for storage management system).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Gonda to implement a storage management system as taught by Blumenau. One of ordinary skill in the art would be motivated to employ Blumenau in order to provide centralized data management and strengthen security by removal of trust requirement in accessing storage in network communications. (see Blumenau col. 5, lines 33-38)

Regarding Claim 16 (Currently Amended), Gonda discloses a method for managing storage, comprising:

a) receiving a request to change a configuration of an integrated storage and networking system (see Gonda col. 8, lines 7-14: request for service modification);

b) analyzing said request to determine a new configuration; sending new configuration information to at least one of a plurality of subsystem managers. (see Gonda col. 7, lines 51-56: configuration changes processed and implemented)

d) sending new configuration information to at least one of a plurality of subsystem managers. (see Gonda col. 7, lines 51-56: process modifications to configuration)

Gonda does not disclose the usage of logical partitioning and virtual LAN (i.e. virtual router, VPN) technology. However, Rao and Brenner discloses:

c) Gonda discloses updating configuration tables (see Gonda col. 7, lines 51-56). Gonda does not disclose a storage management system that

comprises a mapping between a logical partition in a server and at least one of a plurality of HBAs. However, Blumenau discloses a mapping between a logical partition and at least one of a plurality of HBAs coupled to at least one storage volume and a mapping between a virtual router and the logical partition; (see Blumenau col. 2, lines 4-12; col. 8, lines 35-41: storage device mapping information and HBA information) (see Rao col. 2, lines 28-30; col. 9, lines 30-43: VLAN, one or more virtual routers, mapping between virtual router and host (i.e. authorized used, customer)) (see Brenner col. 5, lines 5-8; col. 4, lines 45-50; col. 8, line 66 - col. 9, line 4: mapping between host and logical partition, mapping between host (i.e. customer) and virtual router, resulting in mapping between virtual router and host)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gonda to implement a storage management system as taught by Blumenau, and to enable the utilization of virtual LAN technology with virtual router capability as taught by Rao, and to enable the creation and usage of management information to implement logical partition technology as taught by Brenner. One of ordinary skill in the art would be motivated to employ Blumenau in order to provide centralized data management and strengthen security by removal of trust requirement in accessing storage in network communications (see Blumenau col. 5, lines 33-38), and to employ Rao in order to provide fault tolerant and efficient services within

an network environment with increased number and variety of network traffic (see Rao col. 2, lines 6-9), and to employ Brenner in order to enable the creation of multiple independent processing environments (see Brenner col. 2, lines 43-48).

Regarding Claim 17 (Currently Amended), **18** (Currently Amended), Gonda discloses a method for managing a configuration for a virtual private network and at least one of a plurality of servers, comprising:

a) receiving at a subsystem manager a request to change to a new configuration for a virtual private network of an integrated storage and networking system; (see Gonda col. 8, lines 7-14: request for service modification)

b) analyzing said request to determine a new configuration for said virtual private network of said integrated storage and networking system; (see Gonda col. 7, lines 51-56: configuration changes processed and implemented)

d) sending commands to a virtual private network/LAN switch router to implement said new configuration. (see Gonda col. 12, lines 12-18: process commands to update configuration)

c) Gonda discloses updating configuration tables and sending commands to a virtual private network router to implement said new configuration. (see Gonda col. 7, lines 51-56). Gonda does not disclose a storage management system that comprises a mapping between a logical

partition in a server and at least one of a plurality of HBAs. However, Blumenau discloses a mapping between a logical partition and at least one of a plurality of HBAs coupled to at least one storage volume and a mapping between a virtual router and the logical partition; (see Blumenau col. 2, lines 4-12; col. 8, lines 35-41: mapping information between volumes and physical devices, HBA information) (see Rao col. 2, lines 28-30; col. 9, lines 30-43: VLAN, one or more virtual routers, mapping between virtual router and host (i.e. authorized used, customer)) (see Brenner col. 5, lines 5-8; col. 4, lines 45-50; col. 8, line 66 - col. 9, line 4: mapping between host and logical partition, mapping between host (i.e. customer) and virtual router, resulting in mapping between virtual router and host)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gonda to implement a storage management system as taught by Blumenau, and to enable the utilization of virtual LAN technology with virtual router capability as taught by Rao, and to enable the creation and usage of management information to implement logical partition technology as taught by Brenner. One of ordinary skill in the art would be motivated to employ Blumenau in order to provide centralized data management and strengthen security by removal of trust requirement in accessing storage in network communications (see Blumenau col. 5, lines 33-38), and to employ Rao in order to provide fault tolerant and efficient services within an network

environment with increased number and variety of network traffic (see Rao col. 2, lines 6-9), and to employ Brenner in order to enable the creation of multiple independent processing environments (see Brenner col. 2, lines 43-48).

Regarding Claim 19 (Currently Amended), Gonda discloses a method for managing a configuration for at least one of a plurality of storage devices, comprising:

a) receiving at a subsystem manager a request to change to a new configuration for at least one of a plurality of storage devices of an integrated storage and networking system; (see Gonda col. 8, lines 7-14: request for service modification)

b) analyzing said request to determine a new configuration for said at least one of a plurality of storage devices of said integrated storage and networking system; (see Gonda col. 7, lines 51-56: configuration changes processed and implemented)

d) sending commands to a fibre channel switch to implement said new configuration. (see Gonda col. 12, lines 12-18: process commands to update configuration)

c) Gonda discloses updating configuration tables to reflect said new configuration and sending commands to a switch. Gonda does not disclose a mapping between a logical partition and at least one of a plurality of HBAs and a fibre channel switch. However, Blumenau discloses a mapping

between a logical partition and at least one of a plurality of HBAs coupled to at least one storage volume and a mapping between a virtual router and the logical partition (see Blumenau col. 2, lines 4-12; col. 8, lines 35-41: mapping information between volumes and physical devices, HBA information) and a fibre channel switch (see Blumenau col. 7, lines 13-16; col. 7, 27-32: fibre channel communications). (see Rao col. 2, lines 28-30; col. 9, lines 30-43: VLAN, one or more virtual routers, mapping between virtual router and host (i.e. authorized used, customer)) (see Brenner col. 5, lines 5-8; col. 4, lines 45-50; col. 8, line 66 - col. 9, line 4: mapping between host and logical partition, mapping between host (i.e. customer) and virtual router, resulting in mapping between virtual router and host)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gonda to implement a storage management system as taught by Blumenau, and to enable the utilization of virtual LAN technology with virtual router capability as taught by Rao, and to enable the creation and usage of management information to implement logical partition technology as taught by Brenner. One of ordinary skill in the art would be motivated to employ Blumenau in order to provide centralized data management and strengthen security by removal of trust requirement in accessing storage in network communications (see Blumenau col. 5, lines 33-38), and to employ Rao in order to provide fault tolerant and efficient services within an network environment with increased number and variety of network traffic (see Rao col. 2, lines 6-9), and to employ Brenner in order

to enable the creation of multiple independent processing environments (see Brenner col. 2, lines 43-48).

6. **Claim 12 -** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonda-Rao-Brenner-Blumenau and further in view of Bradley et al. (US Patent No. 6,584,507).

Regarding Claim 12, Gonda discloses an integrated management system comprising a server table, having a server identification, an address, a physical server identifier (see Gonda col. 14, lines 51-53: service unit (server) identification), a virtual LAN identifier, a logical partition (LPAR) identification, an operating system identifier, and CPU information. Blumenau discloses a management system further comprising a host bus adapter (HBA) identification (see Blumenau col. 2, lines 4-12; col. 8, lines 35-41: mapping information between volumes and physical devices, HBA information). Gonda and Blumenau do not disclose an application identification and operating system information. However, Bradley discloses the system of claim 8, an application identification and operating system information (see Bradley col. 3, lines 54-57: application identification; col. 16, lines 61-62: operating system information)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gonda to utilize an application server for application management as taught by Bradley. One of ordinary skill in the art would be motivated to employ Bradley in order to correctly certify the integration

of applications within the network management system. (see Bradley col. 2, lines 64-67: *" ... certifying that the connection information will correctly integrate the application program with the network management system ... certifying information that identifies the connection as certified ... "*)

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyung H. Shin whose telephone number is (571) 272-3920. The examiner can normally be reached on 9 am - 7 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KHS

Kyung H Shin
Patent Examiner
Art Unit 2143

KHS
August 11, 2005

WILLIAM C. VAUGHN, JR.
PRIMARY EXAMINER